435

1991 OPERATIONAL REPORT
VAPOR EXTRACTION SYSTEM
SECO PRODUCTS
WASHINGTON, MISSOURI

March 24, 1992

Prepared for

Hussmann Corporation
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Bridgeton, Mo 63044

Prepared by

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Geraghty & Miller, Inc., is submitting this report to Hussmann Corporation for work performed at the SECO Products facility in Washington, Missouri. The report was prepared in conformance with Geraghty & Miller's strict quality assurance/quality control procedures to ensure that the report meets the highest standards in terms of the methods used and the information presented. If you have any questions or comments concerning this report, please contact one of the individuals listed below.

Very truly yours,

GERAGHTY & MILLER, INC.

Gregory D. Sengelmann
Manager, Hydrocarbon Services

Thomas A. Carothers
Associate
Manager, Ground Water Services

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1991 OPERATIONAL REPORT
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WASHINGTON, MISSOURI

INTRODUCTION

This report is being submitted to the United States Environmental Protection Agency (EPA) Region VII and the Missouri Department of Natural Resources (MDNR) Air Pollution Control Program on behalf of Hussmann Corporation in accordance with their Remedial Action Plan (RAP) document that was approved by the EPA per a 3008(h) Consent Order. The report presents the operational and analytical results for the second year of operation (1991) of the vapor extraction system (VES) installed at the SECO Products facility in Washington, Missouri.

BACKGROUND

The VES was installed in the area east of the lagoon and north of the plant building (Figure 1). During previous investigations of this area, using soil borings and soil gas sampling techniques, the soils were found to contain varying concentrations of organic solvents, primarily trichloroethylene (TCE) and trans-1,2-dichloroethylene (t-1,2-DCE). A pilot test system utilizing four VES wells (VT-1 through VT-4) was installed and monitored to determine whether this type of RAP was a viable option for remediating the soils in this area. The results of the pilot test system, described in the RAP document, indicated a VES would provide effective volatile organic recovery in the area east of the lagoon.

During the period from August 8 to September 8, 1989, 17 additional VES wells (VT-5 through VT-21) were installed in the area east of the lagoon (Figure 2). The VES wells were connected to two-inch PVC lateral alignments (Alignments A, B, C, D, and E) that were piped to a common vacuum blower system. Each of the four pilot test VES wells (VT-1 through VT-4) also were left connected to this blower system, although only VES wells VT-3 and VT-4 are being used at this time. The VES is designed so that either lateral

alignments or individual wells can be monitored and sampled. Individual wells also can be opened to the atmosphere to allow ambient air movement into the shallow soils and therefore enhance the effectiveness of the system. The VES was started on January 22, 1990, following air permit approval by the MDNR Air Pollution Control Program.

OPERATIONAL AND MAINTENANCE

The VES is inspected during each sampling round by a Geraghty & Miller representative. Normal activities consist of cleaning the particulate filter system, inspecting the blower for wear and heat damage, and obtaining stack temperature and vacuum pressure readings. Any repairs or modifications made to the VES are recorded in a field notebook. There were no repairs and/or shutdowns of the VES during 1991.

VES SAMPLING AND ANALYSIS

Sampling of the exhaust stack and Alignments A, B, C, D, and E, along with VES wells VT-3 and VT-4, has been completed for the second year of operation. The sampling in now conducted on a semiannual basis. The stack discharge and vapor well alignment laboratory sample results are summarized in Table 1, and laboratory reports for 1991 are presented as Appendix A.

The laboratory results are presented in milligrams per liter and micrograms per liter (μg/L) of air (e.g., weight per volume air). In order to convert this value to parts per million (ppm) constituent volume, the following equation is used:

$$\text{ppm constituent volume} = \frac{\mu\text{g/L of air} \times 24.45}{\text{molecular weight (constituent)}}$$

Several synthetic volatile organic compounds (VOCs), including vinyl chloride (VC), toluene, 1,1-trichloroethane (1,1,1-TCA), TCE, and t-1,2-DCE, as well as methane, a

naturally occurring organic compound, were detected during the first quarter 1990 sampling round. From the second quarter 1990 to the end of 1991 a marked decline in both the number of organic constituents detected and their concentrations was observed. VC, 1,1,1-TCA, and toluene have not been detected since the first quarter 1990, and t-1,2-DCE has been detected only in the low parts-per-billion range in alignments D and E. Since startup of the system, concentrations of TCE have remained relatively constant in Alignments A and B, but have been greatly reduced in Alignments C, D, and E. The VOC concentrations in VES wells VT-3 and VT-4 have been very low to not detected since the second quarter 1990 sampling event. These two wells were shut in after the first semiannual sampling event of 1991 to increase the vacuum on the five VES well alignments.

A graph of TCE and t-1,2-DCE concentrations versus time for the stack discharge is presented as Figure 3. As expected, the graph of the stack discharge shows an initial increase in organic vapor concentrations during the first months of operation and then a steady decrease over the course of the next two years. A graph of TCE concentrations versus time for Alignments A, B, C, D, and E is presented as Figure 4. TCE concentrations have held relatively stable in Alignments A and B, whereas TCE concentrations in Alignments D and E have shown a steady decline since system startup.

During the first and second years of operation the VES has removed a significant amount of VOCs from the unsaturated soils in the area east of the lagoon. Mass transfer calculations using average air flow rates, vapor temperatures, and concentrations from the stack samples for TCE and t-1,2-DCE indicate approximately 810 pounds of TCE and 7 pounds of t-1,2-DCE were removed from the soils by the VES in 1990 and 272 pounds of TCE were removed by the VES in 1991. In addition, several hundred pounds of methane have been removed.

Ground water levels have been monitored at the site prior to, during, and after installation and startup of the VES. During this time the VES has caused no ground water anomalies, such as mounding, in this area of the site. Ground water levels will continue to

be monitored on a regular basis, and any anomalies will be reported in the annual VES report.

SUMMARY

Per the RAP document, the VES will be operated until the air discharge contains equal to or less than background levels of TCE as determined by a portable organic vapor detector (HNU or OVA). Once background levels are obtained, the system will be shut down for a period of one month. After one month, the system will be restarted and operated one day per month until the first air discharge contains a TCE concentration equal to or less than background as determined by a portable organic vapor detector (HNU or OVA) and confirmed by GC/MS analysis. When six consecutive cycles show that the first vapor discharge is equal to or less than background, the system will be shut down permanently.

In order to maximize the soil remediation by the VES, some operational changes are anticipated during 1992. Certain wells and alignments may be isolated from the vacuum system and opened to the atmosphere to serve as air injection wells. The vent wells will be selected by location and VOC production rates. A well or alignment with very low VOC levels will be used in most cases. These operational adjustments should serve to alter subsurface vapor flow and increase the total VOC withdrawal. Any operational modifications during 1992 will be reported in the next annual operational report.

The operation of the VES has been successful with about 1,082 pounds of TCE removed since system startup. No major operational problems have occurred, and moderate levels of TCE continue to be extracted from the soils east of the lagoon.

Table 1. Cumulative Table of VES Sample Analyses
SECO Products Facility, Washington, Missouri, Hussmann Corporation.

Sample	Date	Time	Laboratory	Report No.	Methane	TCE	t-1,2-DCE	1,1,1-TCA	Vinyl Chloride	Toluene
ALN-A	01/22/90	1640	continental		35,146.88	5.02	-1.26	-0.92	-1.96	2.39
	04/03/90	1040	continental		-7,640.63	4.71	-1.26	-0.92	-1.96	-1.33
	07/26/90	945	continental	90070889	-15.28	-0.93	-1.26	-0.92	-1.96	-1.33
	10/12/90	1020	continental	90100509	-7.64	7.11	-1.26	-0.92	-1.96	-1.33
	01/24/91	1428	continental	91010606	-7.64	-0.93	-1.26	-0.92	-1.96	-1.33
	07/11/91	1645	continental	91070526	19.87	5.21	-1.26	-0.92	-1.96	-1.33
ALN-B	01/22/90	1655	continental		21,393.75	3.91	4.79	-0.92	4.70	-1.33
	04/03/90	1025	continental		30,562.50	3.20	-1.26	-0.92	-1.96	-1.33
	07/26/90	935	continental	90070887	-15.28	7.11	-1.26	-0.92	-1.96	-1.33
	10/12/90	1010	continental	90100507	-7.64	10.20	-1.26	-0.92	-1.96	-1.33
	01/24/91	1420	continental	91010607	-7.64	-0.93	-1.26	-0.92	-1.96	-1.33
	07/11/91	1645	continental	91070527	18.34	6.51	-1.26	-0.92	-1.96	-1.33
ALN-C	01/22/90	1715	continental		56,540.63	27.91	-1.26	-0.92	-1.96	2.12
	04/03/90	1030	continental		59,596.88	1.30	-1.26	-0.92	-1.96	-1.33
	07/26/90	940	continental	90070889	198.66	4.71	-1.26	-0.92	-1.96	-1.33
	10/12/90	1015	continental	90100508	-7.64	-0.93	-1.26	-0.92	-1.96	-1.33
	01/24/91	1425	continental	91010608	-7.64	-0.93	-1.26	-0.92	-1.96	-1.33
	07/11/91	1645	continental	91070528	136.00	2.05	-1.26	-0.92	-1.96	-1.33
ALN-D	01/22/90	1730	continental		70,293.75	204.70	3.03	2.60	-1.96	-1.33
	04/03/90	1045	continental		105,440.63	94.90	-1.26	-0.92	-1.96	-1.33
	07/26/90	950	continental	90070884	-15.28	1.19	-1.26	-0.92	-1.96	-1.33
	10/12/90	1025	continental	90100510	-7.64	22.29	-1.26	-0.92	-1.96	-1.33
	01/24/91	1433	continental	91010609	-7.64	-0.93	-1.26	-0.92	-1.96	-1.33
	07/11/91	1645	continental	91070529	13.91	48.38	1.87	-0.92	-1.96	-1.33
ALN-E	01/22/90	1750	continental		305,625.00	130.30	37.83	-0.92	12.94	-1.33
	04/03/90	1050	continental		213,937.50	122.82	6.81	-0.92	-1.96	-1.33
	07/26/90	955	continental	90070891	1,436.44	5.81	-1.26	-0.92	-1.96	-1.33
	10/12/90	1030	continental	90100511	143.64	78.19	-1.26	-0.92	-1.96	-1.33
	02/06/91	1330	continental	91020215	213.94	6.14	-1.26	-0.92	-1.96	-1.33
	07/11/91	1645	continental	91070530	149.76	35.36	1.79	-0.92	-1.96	-1.33
STACK	01/22/90	1600	continental	90010993	111,553.13	76.30	3.28	-0.92	3.02	1.72
	01/24/90	740	continental	90011108	80,991.54	115.39	5.04	-0.92	-1.96	-1.33

TCE -Trichloroethylene
t-1,2-DCE -Trans-1,2-dichloroethylene
1,1,1-TCA -1,1,1-trichloroethane

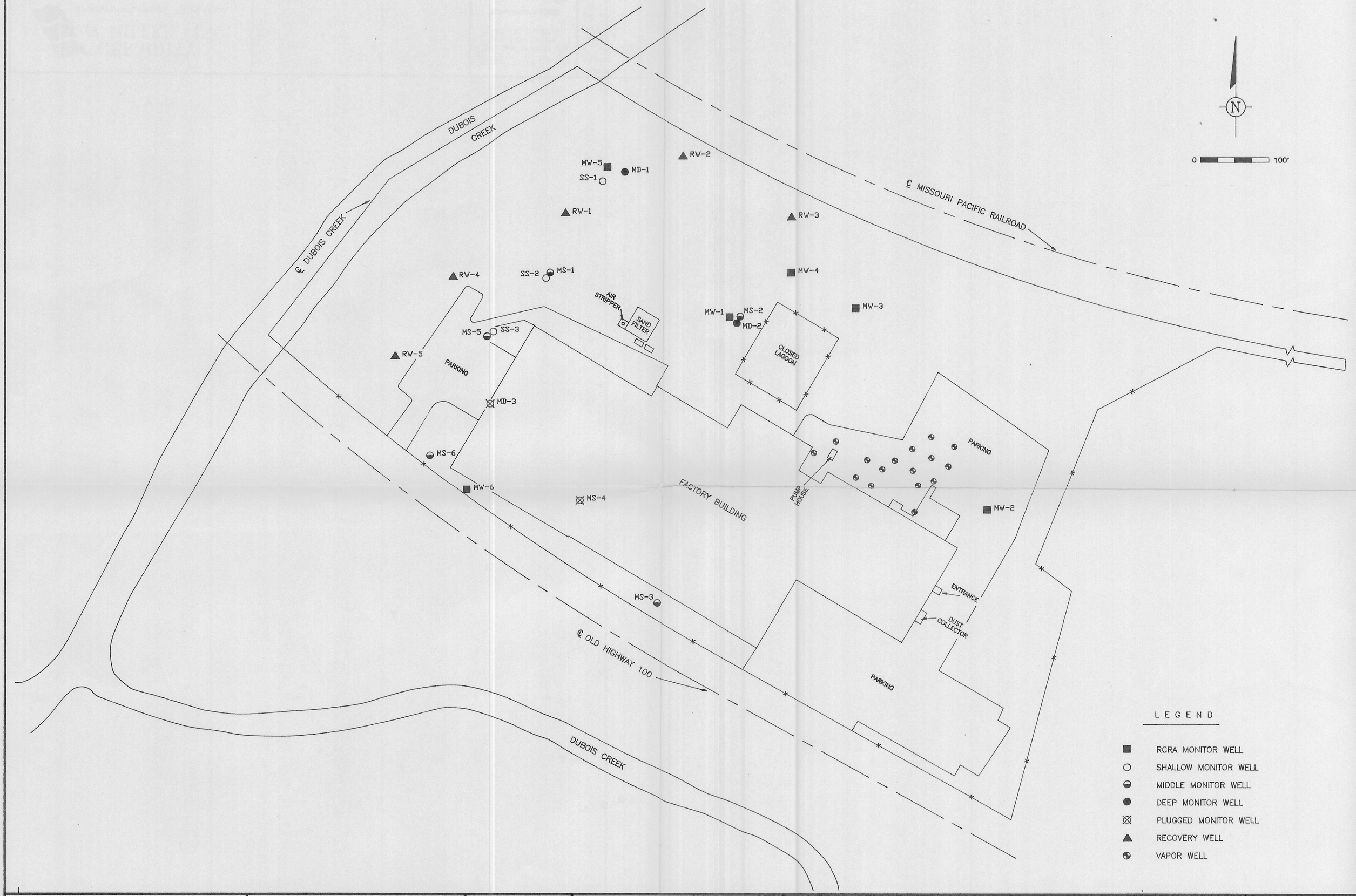
Note: 1. All units in parts per million.
2. Negative values indicate below detection limits.

Table 1. Cumulative Table of VES Sample Analyses
SECO Products Facility, Washington, Missouri, Hussmann Corporation.

Sample	Date	Time	Laboratory	Report No.	Methane	TCE	t-1,2-DCE	1,1,1-TCA	Vinyl Chloride	Toluene
STACK	03/01/90	1745	continental	90030040	24,450.00	102.35	2.77	0.09	-1.96	-1.33
	04/03/90	950	continental	90040092	59,596.88	50.21	1.26	-0.92	-1.96	-1.33
	05/30/90	0	CONTINENTAL	90050846	534.84	26.05	-1.26	-0.92	-1.96	-1.33
	07/26/90	910	continental	90070884	1,207.22	57.71	-1.26	-0.92	-1.96	-1.33
	10/12/90	955	continental	90100504	74.88	46.52	-1.26	-0.92	-1.96	-1.33
	01/24/91	1415	continental	91010603	20.63	2.98	-1.26	-0.92	-1.96	-1.33
	07/11/91	1645	continental	91070525	93.22	16.75	-1.26	-0.92	-1.96	-1.33
VT- 3	01/22/90	1610	continental		-7,640.63	-0.93	-1.26	-0.92	-1.96	-1.33
	04/03/90	1010	continental		24,450.00	3.29	-1.26	-0.92	-1.96	-1.33
	07/26/90	915	continental	90070886	-15.28	0.93	-1.26	-0.92	-1.96	-1.33
	10/12/90	1000	continental	90100505	-7,640.63	2.61	-1.26	-0.92	-1.96	-1.33
	01/24/91	1445	continental	91010604	-7.64	-0.93	-1.26	-0.92	-1.96	-1.33
VT- 4	01/22/90	1625	continental		-7,640.63	-0.93	-1.26	-0.92	-1.96	-1.33
	04/03/90	1020	continental		-7,640.63	0.93	-1.26	-0.92	-1.96	-1.33
	07/26/90	1000	continental	90070887	-15.28	-0.93	-1.26	-0.92	-1.96	-1.33
	10/12/90	1005	continental	90100506	-7.64	-0.93	-1.26	-0.92	-1.96	-1.33
	01/24/91	1450	continental	91010605	-7.64	-0.93	-1.26	-0.92	-1.96	-1.33

TCE -Trichloroethylene
t-1,2-DCE -Trans-1,2-dichloroethylene
1,1,1-TCA -1,1,1-trichloroethane

Note: 1. All units in parts per million.
2. Negative values indicate below detection limits.



GERAGHTY & MILLER, INC.
Environmental Services

SCALE VERIFICATION

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING:

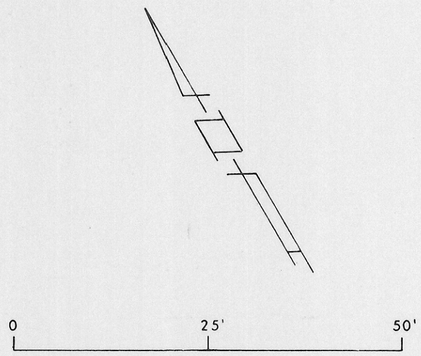
USE TO VERIFY FIGURE REPRODUCTION SCALE

PROJECT NO.:	CC156.01	FILE NO:	–
DRAWING:	–	PLOT SIZE:	1=100
DRAFTED BY:	LGF	DATE:	05FEB92
CHECKED BY:	G. SENGELMANN	DATE:	–
APPROVED BY:	T. CAROTHERS	DATE:	–

SITE MAP

SECO PRODUCTS
FRANKLIN COUNTY, MISSOURI

FIGURE 1



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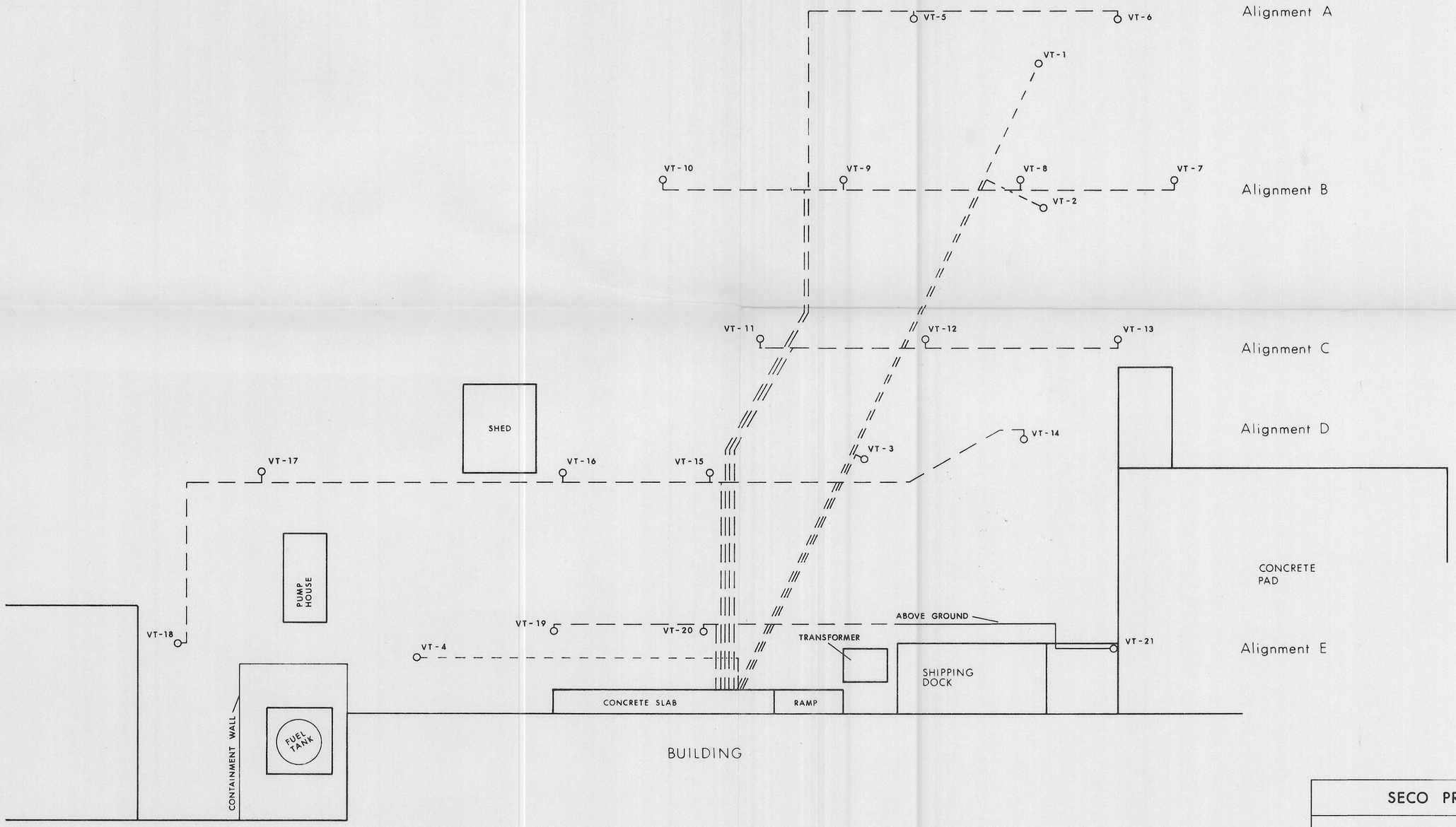

SECO PRODUCTS

AREA EAST OF LAGOON
VES WELLS AND
LATERAL ALIGNMENT

GERAGHTY & MILLER, INC.
Environmental Services

Figure 2

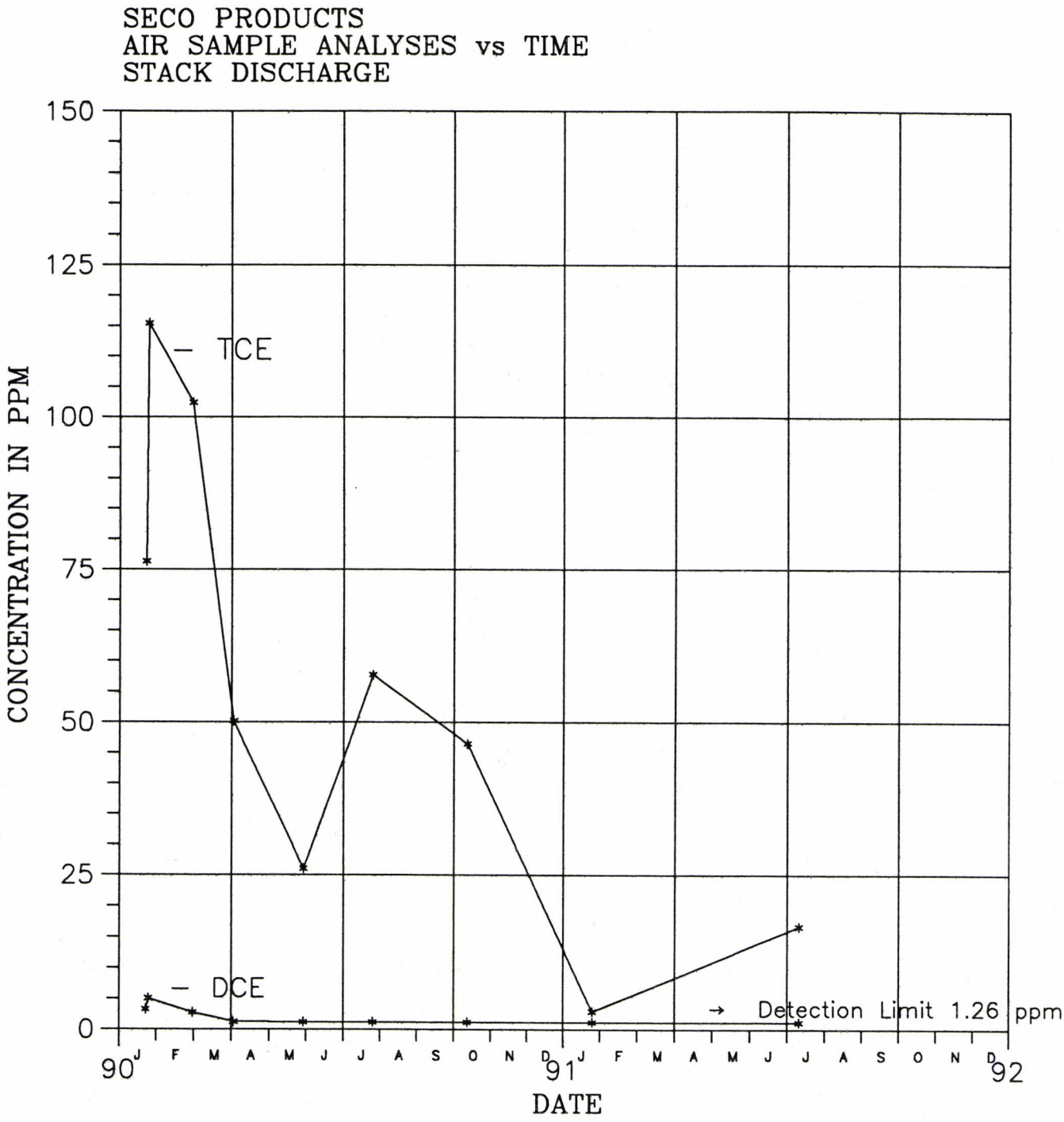
SECO PRODUCTS
AIR SAMPLE ANALYSES vs TIME
STACK DISCHARGE
CONCENTRATION IN PPM
150
125
100
75
50
25
0
— TCE
— DCE
→ Detection Limit 1.26 ppm
J F M A M J J A S O N D J F M A M J J A S O N D
90
91
92
DATE

Figure 3

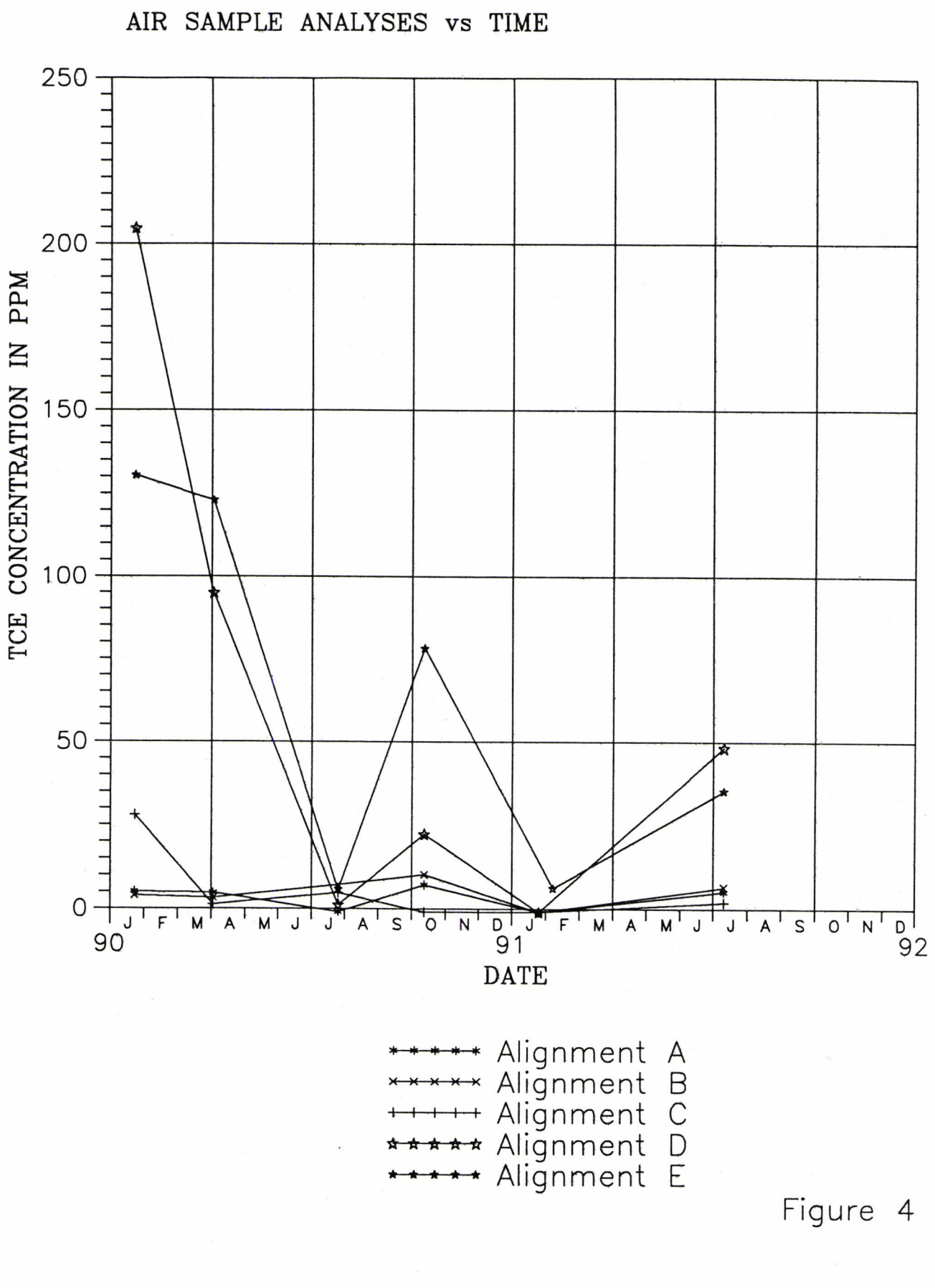
AIR SAMPLE ANALYSES vs TIME
250
200
150
100
50
0
TCE CONCENTRATION IN PPM
J F M A M J J A S O N D J F M A M J J A S O N D
90
91
92
DATE
Alignment A
Alignment B
Alignment C
Alignment D
Alignment E

Figure 4

APPENDIX A

LABORATORY ANALYSES

CAS
CONTINENTAL ANALYTICAL SERVICES, INC.
1804 GLENDALE ROAD • SALINA, KANSAS 67401
(913) 827-1273 • (800) 535-3076 • FAX (913) 823-7830

CLIENT: GERAGHTY & MILLER, INC.
ATTN:GREG SENGELMANN
1700 AMERICAN BANK PLAZA
CORPUS CHRISTI, TX 78475

DATE SAMPLE RPTD: 02/01/91
DATE SAMPLE RECD: 01/25/91
CAS FILE NO: 91-5087
CAS ORDER NO: 5656
CLIENT P.O.: CUST. AC # 184

LAB NUMBER: 91010603
SAMPLE DESCRIPTION: TAG #749 STACK

DATE SAMPLED: 01/24/91
TIME SAMPLED: 1415

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	13.5	UG/L	327/29
GC/MS VOLATILE COMPOUNDS			/
VINYL CHLORIDE	ND(5.0)	UG/L OF AIR	289/63
TRICHLOROETHYLENE	16.	UG/L OF AIR	289/63
TOLUENE	ND(5.0)	UG/L OF AIR	289/63
TETRACHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/63
METHYLENE CHLORIDE	ND(5.0)	UG/L OF AIR	289/63
ETHYLBENZENE	ND(5.0)	UG/L OF AIR	289/63
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/63
CHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/63
CHLOROFORM	ND(5.0)	UG/L OF AIR	289/63
CHLOROETHANE	ND(5.0)	UG/L OF AIR	289/63
CHLOROBENZENE	ND(5.0)	UG/L OF AIR	289/63
CARBON TETRACHLORIDE	ND(5.0)	UG/L OF AIR	289/63
BROMOMETHANE	ND(5.0)	UG/L OF AIR	289/63
BROMOFORM	ND(5.0)	UG/L OF AIR	289/63
BROMODICHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/63
BENZENE	ND(5.0)	UG/L OF AIR	289/63
ACRYLONITRILE	ND(25.)	UG/L OF AIR	289/63
ACROLEIN	ND(25.)	UG/L OF AIR	289/63
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L OF AIR	289/63
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/63
1,2-DICHLOROPROPANE	ND(5.0)	UG/L OF AIR	289/63
1,2-DICHLOROETHYLENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/63
1,2-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/63
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/63
1,1-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/63
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/63
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L OF AIR	289/63
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/63

CONCLUSION OF LAB NUMBER: 91010603

LAB NUMBER: 91010604
SAMPLE DESCRIPTION: TAG #755 VT-3

DATE SAMPLED: 01/24/91
TIME SAMPLED: 1445

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE

-CONTINUED-

CLIENT: GERAGHTY & MILLER, INC.
LAB NUMBER: 91010604

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	ND(5)	UG/L	327/29
GC/MS VOLATILE COMPOUNDS			/
VINYL CHLORIDE	ND(5.0)	UG/L OF AIR	289/64
TRICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/64
TOLUENE	ND(5.0)	UG/L OF AIR	289/64
TETRACHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/64
METHYLENE CHLORIDE	ND(5.0)	UG/L OF AIR	289/64
ETHYLBENZENE	ND(5.0)	UG/L OF AIR	289/64
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/64
CHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/64
CHLOROFORM	ND(5.0)	UG/L OF AIR	289/64
CHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
CHLOROBENZENE	ND(5.0)	UG/L OF AIR	289/64
CARBON TETRACHLORIDE	ND(5.0)	UG/L OF AIR	289/64
BROMOMETHANE	ND(5.0)	UG/L OF AIR	289/64
BROMOFORM	ND(5.0)	UG/L OF AIR	289/64
BROMODICHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/64
BENZENE	ND(5.0)	UG/L OF AIR	289/64
ACRYLONITRILE	ND(25.)	UG/L OF AIR	289/64
ACROLEIN	ND(25.)	UG/L OF AIR	289/64
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L OF AIR	289/64
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/64
1,2-DICHLOROPROPANE	ND(5.0)	UG/L OF AIR	289/64
1,2-DICHLOROETHYLENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/64
1,2-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/64
1,1-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64

CONCLUSION OF LAB NUMBER: 91010604

LAB NUMBER: 91010605 DATE SAMPLED: 01/24/91
SAMPLE DESCRIPTION: TAG #756 VT-4 TIME SAMPLED: 1450

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	ND(5)	UG/L	327/29
GC/MS VOLATILE COMPOUNDS			/
VINYL CHLORIDE	ND(5.0)	UG/L OF AIR	289/64
TRICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/64
TOLUENE	ND(5.0)	UG/L OF AIR	289/64
TETRACHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/64
METHYLENE CHLORIDE	ND(5.0)	UG/L OF AIR	289/64
ETHYLBENZENE	ND(5.0)	UG/L OF AIR	289/64
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/64

-CONTINUED-

CLIENT: GERAGHTY & MILLER, INC.
LAB NUMBER: 91010605

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
CHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/64
CHLOROFORM	ND(5.0)	UG/L OF AIR	289/64
CHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
CHLOROBENZENE	ND(5.0)	UG/L OF AIR	289/64
CARBON TETRACHLORIDE	ND(5.0)	UG/L OF AIR	289/64
BROMOMETHANE	ND(5.0)	UG/L OF AIR	289/64
BROMOFORM	ND(5.0)	UG/L OF AIR	289/64
BROMODICHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/64
BENZENE	ND(5.0)	UG/L OF AIR	289/64
ACRYLONITRILE	ND(25.)	UG/L OF AIR	289/64
ACROLEIN	ND(25.)	UG/L OF AIR	289/64
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L OF AIR	289/64
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/64
1,2-DICHLOROPROPANE	ND(5.0)	UG/L OF AIR	289/64
1,2-DICHLOROETHYLENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/64
1,2-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/64
1,1-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64

CONCLUSION OF LAB NUMBER: 91010605

LAB NUMBER: 91010606 DATE SAMPLED: 01/24/91
SAMPLE DESCRIPTION: TAG #753 ALIGN. A TIME SAMPLED: 1428

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	ND(5)	UG/L	327/29 /
GC/MS VOLATILE COMPOUNDS			
VINYL CHLORIDE	ND(5.0)	UG/L OF AIR	289/64
TRICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/64
TOLUENE	ND(5.0)	UG/L OF AIR	289/64
TETRACHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/64
METHYLENE CHLORIDE	ND(5.0)	UG/L OF AIR	289/64
ETHYLBENZENE	ND(5.0)	UG/L OF AIR	289/64
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/64
CHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/64
CHLOROFORM	ND(5.0)	UG/L OF AIR	289/64
CHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
CHLOROBENZENE	ND(5.0)	UG/L OF AIR	289/64
CARBON TETRACHLORIDE	ND(5.0)	UG/L OF AIR	289/64
BROMOMETHANE	ND(5.0)	UG/L OF AIR	289/64
BROMOFORM	ND(5.0)	UG/L OF AIR	289/64
BROMODICHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/64
BENZENE	ND(5.0)	UG/L OF AIR	289/64

-CONTINUED-

CLIENT: GERAGHTY & MILLER, INC.
LAB NUMBER: 91010606

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
ACRYLONITRILE	ND(25.)	UG/L OF AIR	289/64
ACROLEIN	ND(25.)	UG/L OF AIR	289/64
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L OF AIR	289/64
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/64
1,2-DICHLOROPROPANE	ND(5.0)	UG/L OF AIR	289/64
1,2-DICHLOROETHYLENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/64
1,2-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/64
1,1-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64

CONCLUSION OF LAB NUMBER: 91010606

LAB NUMBER: 91010607
SAMPLE DESCRIPTION: TAG #750 ALIGN. B

DATE SAMPLED: 01/24/91
TIME SAMPLED: 1420

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	ND(5)	UG/L	327/29
GC/MS VOLATILE COMPOUNDS			/
VINYL CHLORIDE	ND(5.0)	UG/L OF AIR	289/64
TRICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/64
TOLUENE	ND(5.0)	UG/L OF AIR	289/64
TETRACHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/64
METHYLENE CHLORIDE	ND(5.0)	UG/L OF AIR	289/64
ETHYLBENZENE	ND(5.0)	UG/L OF AIR	289/64
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/64
CHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/64
CHLOROFORM	ND(5.0)	UG/L OF AIR	289/64
CHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
CHLOROBENZENE	ND(5.0)	UG/L OF AIR	289/64
CARBON TETRACHLORIDE	ND(5.0)	UG/L OF AIR	289/64
BROMOMETHANE	ND(5.0)	UG/L OF AIR	289/64
BROMOFORM	ND(5.0)	UG/L OF AIR	289/64
BROMODICHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/64
BENZENE	ND(5.0)	UG/L OF AIR	289/64
ACRYLONITRILE	ND(25.)	UG/L OF AIR	289/64
ACROLEIN	ND(25.)	UG/L OF AIR	289/64
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L OF AIR	289/64
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/64
1,2-DICHLOROPROPANE	ND(5.0)	UG/L OF AIR	289/64
1,2-DICHLOROETHYLENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/64
1,2-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/64
1,1-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64

-CONTINUED-

CLIENT: GERAGHTY & MILLER, INC.
LAB NUMBER: 91010607

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/64

CONCLUSION OF LAB NUMBER: 91010607

LAB NUMBER: 91010608 DATE SAMPLED: 01/24/91
SAMPLE DESCRIPTION: TAG #751 ALIGN. C TIME SAMPLED: 1425

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	ND(5)	UG/L	327/29
GC/MS VOLATILE COMPOUNDS			/
VINYL CHLORIDE	ND(5.0)	UG/L OF AIR	289/65
TRICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/65
TOLUENE	ND(5.0)	UG/L OF AIR	289/65
TETRACHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/65
METHYLENE CHLORIDE	ND(5.0)	UG/L OF AIR	289/65
ETHYLBENZENE	ND(5.0)	UG/L OF AIR	289/65
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/65
CHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/65
CHLOROFORM	ND(5.0)	UG/L OF AIR	289/65
CHLOROETHANE	ND(5.0)	UG/L OF AIR	289/65
CHLOROBENZENE	ND(5.0)	UG/L OF AIR	289/65
CARBON TETRACHLORIDE	ND(5.0)	UG/L OF AIR	289/65
BROMOMETHANE	ND(5.0)	UG/L OF AIR	289/65
BROMOFORM	ND(5.0)	UG/L OF AIR	289/65
BROMODICHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/65
BENZENE	ND(5.0)	UG/L OF AIR	289/65
ACRYLONITRILE	ND(25.)	UG/L OF AIR	289/65
ACROLEIN	ND(25.)	UG/L OF AIR	289/65
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L OF AIR	289/65
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/65
1,2-DICHLOROPROPANE	ND(5.0)	UG/L OF AIR	289/65
1,2-DICHLOROETHYLENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/65
1,2-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/65
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/65
1,1-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/65
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/65
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L OF AIR	289/65
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/65

CONCLUSION OF LAB NUMBER: 91010608

-CONTINUED-

CONTINENTAL ANALYTICAL SERVICES, INC.

LABORATORY REPORT PAGE: 6

CLIENT: GERAGHTY & MILLER, INC.

LAB NUMBER: 91010609
SAMPLE DESCRIPTION: TAG #752 ALIGN. D

DATE SAMPLED: 01/24/91
TIME SAMPLED: 1433

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	ND(5)	UG/L	327/29
GC/MS VOLATILE COMPOUNDS			/
VINYL CHLORIDE	ND(5.0)	UG/L OF AIR	289/65
TRICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/65
TOLUENE	ND(5.0)	UG/L OF AIR	289/65
TETRACHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/65
METHYLENE CHLORIDE	ND(5.0)	UG/L OF AIR	289/65
ETHYLBENZENE	ND(5.0)	UG/L OF AIR	289/65
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/65
CHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/65
CHLOROFORM	ND(5.0)	UG/L OF AIR	289/65
CHLOROETHANE	ND(5.0)	UG/L OF AIR	289/65
CHLOROBENZENE	ND(5.0)	UG/L OF AIR	289/65
CARBON TETRACHLORIDE	ND(5.0)	UG/L OF AIR	289/65
BROMOMETHANE	ND(5.0)	UG/L OF AIR	289/65
BROMOFORM	ND(5.0)	UG/L OF AIR	289/65
BROMODICHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/65
BENZENE	ND(5.0)	UG/L OF AIR	289/65
ACRYLONITRILE	ND(25.)	UG/L OF AIR	289/65
ACROLEIN	ND(25.)	UG/L OF AIR	289/65
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L OF AIR	289/65
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/65
1,2-DICHLOROPROPANE	ND(5.0)	UG/L OF AIR	289/65
1,2-DICHLOROETHYLENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/65
1,2-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/65
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/65
1,1-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/65
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/65
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L OF AIR	289/65
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/65

CONCLUSION OF LAB NUMBER: 91010609

LAB NUMBER: 91010610
SAMPLE DESCRIPTION: TAG #754 ALIGN. E

DATE SAMPLED: 01/24/91
TIME SAMPLED: 1438

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
NO TESTS ASSIGNED	BAG RECD TORN		/

CONCLUSION OF LAB NUMBER: 91010610

Quality control analyses were performed on samples at time of analysis in accordance with procedures published in Title 40 of the Code of Federal Regulations part 136, July 1, 1986 or in EPA Publication, SW-846, 3rd edition, Nov. 1986. ND(), where noted, indicates none detected with the detection limit in parentheses.

CONTINENTAL ANALYTICAL SERVICES, INC.

Clifford J. Baker

Clifford J. Baker
Laboratory Director

REED & ASSOCIATES, INC.

CHAIN OF CUSTODY

AIR SAMPLE
CUSTODY AC № 1842

Client HUSSMANN/SEGO
Site/Proj. MO 02601
Sampled By Steve S. Wisdom (signature)
Date 1/24/91

SAMPLE NOs	TAG NOs
STACK	749
VT-3	~~750~~ 755
VT-4	756
ALIGN. A	753
ALIGN. B	750
ALIGN. C	751
ALIGN. D	752
ALIGN. E	754
Bag received torn.	BLP.

SHIPPER
Delivered by _____ (signature)
Carrier FEDERAL EXPRESS
Shipped to CONTINENTAL LABS
Location 1804 GLENDALE, SALINA, KS
Date 1/24/91 Time 16:30

RECEIVER
Received by Beth Palmateer (signature) Date 1-25-91 Time 0930
Delivered to _____ Storage _____
Lab No. _____ Report No. _____

Instructions _____ Rush _____ Before _____ Normal Turnaround
Storage SEE BELOW For _____
Analysis _____ Call for Instructions ( ) –

Specific Organics _____

Method(s) _____ Thermal Desorption _____
GC/MS Scan 8240 Method 8240 PLUS METHANE

Inorganics _____

Methods(s) _____

Metals _____

AA/Method _____

Asbestos count _____

Other particulates _____

Other _____

Report to: GERAGHTY & MILLER
3300 RIDER TRAIL SOUTH, SUITE 510
ST. LOUIS, MO 63045
ATTN: DOUG MARIAN

Call in Results ( )
BILL TO: G&M
1700 AMERICAN BANK PLZ
CORPUS CHRISTI, TX 78475
ATTN: GREG SENGELMANN
ATTN: CHRIS DAWDY

Disposition
✓ Return ~~thermally desorbed tube~~ to TEDLAR BAGS GERAGHTY & MILLER, ST. LOUIS
___ Store until _____ ___ Dispose after analysis

CUSTODY FORMS
★ Completed form accompanies each shipment
★ Sampler, person delivering, lab receiver must sign
★ Detach white copy when shipped (R&A file)
★ Detach yellow copy for lab files
★ RETURN PINK COPY WITH LAB REPORT

CAS
CONTINENTAL ANALYTICAL SERVICES, INC.
1804 GLENDALE ROAD • SALINA, KANSAS 67401
(913) 827-1273 • (800) 535-3076 • FAX (913) 823-7830

CLIENT: GERAGHTY & MILLER, INC.
ATTN:GREG SENGELMANN
1700 AMERICAN BANK PLAZA
CORPUS CHRISTI, TX 78475

DATE SAMPLE RPTD: 02/25/91
DATE SAMPLE RECD: 02/07/91
CAS FILE NO: 91-5087
CAS ORDER NO: 5764
CLIENT P.O.: PROJ. MO02601

LAB NUMBER: 91020215
SAMPLE DESCRIPTION: ALIGNMENT E

DATE SAMPLED: 02/06/91
TIME SAMPLED: 1330

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	140.	UG/L	327/34
GC/MS VOLATILE COMPOUNDS			/
VINYL CHLORIDE	ND(5.0)	UG/L	289/75
TRICHLOROETHYLENE	33.	UG/L	289/75
TOLUENE	ND(5.0)	UG/L	289/75
TETRACHLOROETHYLENE	ND(5.0)	UG/L	289/75
METHYLENE CHLORIDE	ND(5.0)	UG/L	289/75
ETHYLBENZENE	ND(5.0)	UG/L	289/75
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L	289/75
CHLOROMETHANE	ND(5.0)	UG/L	289/75
CHLOROFORM	ND(5.0)	UG/L	289/75
CHLOROETHANE	ND(5.0)	UG/L	289/75
CHLOROBENZENE	ND(5.0)	UG/L	289/75
CARBON TETRACHLORIDE	ND(5.0)	UG/L	289/75
BROMOMETHANE	ND(5.0)	UG/L	289/75
BROMOFORM	ND(5.0)	UG/L	289/75
BROMODICHLOROMETHANE	ND(5.0)	UG/L	289/75
BENZENE	ND(5.0)	UG/L	289/75
ACRYLONITRILE	ND(25.0)	UG/L	289/75
ACROLEIN	ND(25.0)	UG/L	289/75
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L	289/75
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L	289/75
1,2-DICHLOROPROPANE	ND(5.0)	UG/L	289/75
1,2-DICHLOROETHYLENE (TOTAL)	ND(5.0)	UG/L	289/75
1,2-DICHLOROETHANE	ND(5.0)	UG/L	289/75
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L	289/75
1,1-DICHLOROETHANE	ND(5.0)	UG/L	289/75
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L	289/75
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L	289/75
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L	289/75

CONCLUSION OF LAB NUMBER: 91020215

Quality control analyses were performed on samples at time of analysis in accordance with procedures published in Title 40 of the Code of Federal Regulations part 136, July 1, 1986 or in EPA Publication, SW-846, 3rd edition, Nov. 1986. ND(), where noted, indicates none detected with the detection limit in parentheses.

CONTINENTAL ANALYTICAL SERVICES, INC.

Clifford J. Baker

Clifford J. Baker
Laboratory Director

REED & ASSOCIATES, INC.

CHAIN OF CUSTODY

AIR SAMPLE
CUSTODY AC № 1843

Client HUSSMANN/SECO
Site/Proj. MO 02601.1
Sampled By Stan S. Weist (signature)
Date 2/5/91

SAMPLE NOs	TAG NOs
ALLEN. E	757

SHIPPER
Delivered by FEDERAL EXPRESS (signature)
Carrier CONTINENTAL LABS
Shipped to 1804 Glendale Salina, KS
Location
Date 2/6/91 Time 1330 HRS

RECEIVER
Received by _____ (signature) Date _____ Time _____
Delivered to _____ Storage _____
Lab No. _____ Report No. _____

Instructions ~~Rush~~ _____ Before _____ _____ Normal Turnaround
Storage SEE BELOW For _____
Analysis _____ Call for Instructions _____ (___) ___ – _____

Specific Organics _____

Method(s) _____ Thermal Desorption _____
GC/MS Scan 8240 Method 8240 PLUS METHANE

Inorganics _____

Methods(s) _____

Metals _____
AA/Method _____

Asbestos count _____
Other particulates _____

Other _____

Report to: GERAGHTY & MILLER
3300 Rider Trail South; Suite 510
St. Louis, MO 63045
ATTN: Doug Marian

Call in Results (___) ___ – _____
BILL TO: G&M
1700 American Bank Plaza
Corpus Christi, TX 78475
ATTN: Greg Engelmann

Disposition TEDLAR BAGS
✓ Return ~~thermally desorbed tube~~ to GERAGHTY & MILLER, STLOUIS, MO. ATTN: Chris Dawdy
___ Store until _____ ___ Dispose after analysis

CUSTODY FORMS
★ Completed form accompanies each shipment
★ Sampler, person delivering, lab receiver must sign
★ Detach white copy when shipped (R&A file)
★ Detach yellow copy for lab files
★ RETURN PINK COPY WITH LAB REPORT

CAS
CONTINENTAL ANALYTICAL SERVICES, INC.
1804 GLENDALE ROAD • SALINA, KANSAS 67401
(913) 827-1273 • (800) 535-3076 • FAX (913) 823-7830

CLIENT: GERAGHTY & MILLER, INC.
ATTN:GREG SENGELMANN
1700 AMERICAN BANK PLAZA
CORPUS CHRISTI, TX 78475

DATE SAMPLE RPTD: 07/25/91
DATE SAMPLE RECD: 07/12/91
CAS FILE NO: 91-5087
CAS ORDER NO: 7446
CLIENT P.O.:

LAB NUMBER: 91070525
SAMPLE DESCRIPTION: VES STACK #759

DATE SAMPLED: / /
TIME SAMPLED:

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	61.	UG/L OF AIR	484/20
GC/MS VOLATILE COMPOUNDS			/
VINYL CHLORIDE	ND(5.0)	UG/L OF AIR	289/161
TRICHLOROETHYLENE	90	UG/L OF AIR	289/161
TOLUENE	ND(5.0)	UG/L OF AIR	289/161
TETRACHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/161
METHYLENE CHLORIDE	ND(5.0)	UG/L OF AIR	289/161
ETHYLBENZENE	ND(5.0)	UG/L OF AIR	289/161
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/161
CHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/161
CHLOROFORM	ND(5.0)	UG/L OF AIR	289/161
CHLOROETHANE	ND(5.0)	UG/L OF AIR	289/161
CHLOROBENZENE	ND(5.0)	UG/L OF AIR	289/161
CARBON TETRACHLORIDE	ND(5.0)	UG/L OF AIR	289/161
BROMOMETHANE	ND(5.0)	UG/L OF AIR	289/161
BROMOFORM	ND(5.0)	UG/L OF AIR	289/161
BROMODICHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/161
BENZENE	ND(5.0)	UG/L OF AIR	289/161
ACRYLONITRILE	ND(25.)	UG/L OF AIR	289/161
ACROLEIN	ND(25.)	UG/L OF AIR	289/161
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L OF AIR	289/161
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/161
1,2-DICHLOROPROPANE	ND(5.0)	UG/L OF AIR	289/161
1,2-DICHLOROETHYLENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/161
1,2-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/161
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/161
1,1-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/161
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/161
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L OF AIR	289/161
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/161

CONCLUSION OF LAB NUMBER: 91070525

LAB NUMBER: 91070526
SAMPLE DESCRIPTION: ALIGN A #760

DATE SAMPLED: / /
TIME SAMPLED:

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE

-CONTINUED-

CLIENT: GERAGHTY & MILLER, INC.
LAB NUMBER: 91070526

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	13.	UG/L OF AIR	484/20
GC/MS VOLATILE COMPOUNDS			/
VINYL CHLORIDE	ND(5.0)	UG/L OF AIR	289/162
TRICHLOROETHYLENE	28.	UG/L OF AIR	289/162
TOLUENE	ND(5.0)	UG/L OF AIR	289/162
TETRACHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/162
METHYLENE CHLORIDE	ND(5.0)	UG/L OF AIR	289/162
ETHYLBENZENE	ND(5.0)	UG/L OF AIR	289/162
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/162
CHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/162
CHLOROFORM	ND(5.0)	UG/L OF AIR	289/162
CHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
CHLOROBENZENE	ND(5.0)	UG/L OF AIR	289/162
CARBON TETRACHLORIDE	ND(5.0)	UG/L OF AIR	289/162
BROMOMETHANE	ND(5.0)	UG/L OF AIR	289/162
BROMOFORM	ND(5.0)	UG/L OF AIR	289/162
BROMODICHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/162
BENZENE	ND(5.0)	UG/L OF AIR	289/162
ACRYLONITRILE	ND(25.)	UG/L OF AIR	289/162
ACROLEIN	ND(25.)	UG/L OF AIR	289/162
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L OF AIR	289/162
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/162
1,2-DICHLOROPROPANE	ND(5.0)	UG/L OF AIR	289/162
1,2-DICHLOROETHYLENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/162
1,2-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/162
1,1-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162

CONCLUSION OF LAB NUMBER: 91070526

LAB NUMBER: 91070527
SAMPLE DESCRIPTION: ALIGN B #761

DATE SAMPLED: / /
TIME SAMPLED:

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	12.	UG/L OF AIR	484/20
GC/MS VOLATILE COMPOUNDS			/
VINYL CHLORIDE	ND(5.0)	UG/L OF AIR	289/162
TRICHLOROETHYLENE	35.	UG/L OF AIR	289/162
TOLUENE	ND(5.0)	UG/L OF AIR	289/162
TETRACHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/162
METHYLENE CHLORIDE	ND(5.0)	UG/L OF AIR	289/162
ETHYLBENZENE	ND(5.0)	UG/L OF AIR	289/162
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/162

-CONTINUED-

CLIENT: GERAGHTY & MILLER, INC.
LAB NUMBER: 91070527

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
CHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/162
CHLOROFORM	ND(5.0)	UG/L OF AIR	289/162
CHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
CHLOROBENZENE	ND(5.0)	UG/L OF AIR	289/162
CARBON TETRACHLORIDE	ND(5.0)	UG/L OF AIR	289/162
BROMOMETHANE	ND(5.0)	UG/L OF AIR	289/162
BROMOFORM	ND(5.0)	UG/L OF AIR	289/162
BROMODICHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/162
BENZENE	ND(5.0)	UG/L OF AIR	289/162
ACRYLONITRILE	ND(25.)	UG/L OF AIR	289/162
ACROLEIN	ND(25.)	UG/L OF AIR	289/162
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L OF AIR	289/162
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/162
1,2-DICHLOROPROPANE	ND(5.0)	UG/L OF AIR	289/162
1,2-DICHLOROETHYLENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/162
1,2-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/162
1,1-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162

CONCLUSION OF LAB NUMBER: 91070527

LAB NUMBER: 91070528 DATE SAMPLED: / /
SAMPLE DESCRIPTION: ALIGN C #762 TIME SAMPLED:

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	89.	UG/L OF AIR	484/20
GC/MS VOLATILE COMPOUNDS			/
VINYL CHLORIDE	ND(5.0)	UG/L OF AIR	289/162
TRICHLOROETHYLENE	11.	UG/L OF AIR	289/162
TOLUENE	ND(5.0)	UG/L OF AIR	289/162
TETRACHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/162
METHYLENE CHLORIDE	ND(5.0)	UG/L OF AIR	289/162
ETHYLBENZENE	ND(5.0)	UG/L OF AIR	289/162
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/162
CHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/162
CHLOROFORM	ND(5.0)	UG/L OF AIR	289/162
CHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
CHLOROBENZENE	ND(5.0)	UG/L OF AIR	289/162
CARBON TETRACHLORIDE	ND(5.0)	UG/L OF AIR	289/162
BROMOMETHANE	ND(5.0)	UG/L OF AIR	289/162
BROMOFORM	ND(5.0)	UG/L OF AIR	289/162
BROMODICHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/162
BENZENE	ND(5.0)	UG/L OF AIR	289/162

-CONTINUED-

CLIENT: GERAGHTY & MILLER, INC.
LAB NUMBER: 91070528

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
ACRYLONITRILE	ND(25.)	UG/L OF AIR	289/162
ACROLEIN	ND(25.)	UG/L OF AIR	289/162
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L OF AIR	289/162
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/162
1,2-DICHLOROPROPANE	ND(5.0)	UG/L OF AIR	289/162
1,2-DICHLOROETHYLENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/162
1,2-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/162
1,1-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162

CONCLUSION OF LAB NUMBER: 91070528

LAB NUMBER: 91070529
SAMPLE DESCRIPTION: ALIGN D #763

DATE SAMPLED: / /
TIME SAMPLED:

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	9.1	UG/L OF AIR	484/20
GC/MS VOLATILE COMPOUNDS			/
VINYL CHLORIDE	ND(5.0)	UG/L OF AIR	289/162
TRICHLOROETHYLENE	260.	UG/L OF AIR	289/162
TOLUENE	ND(5.0)	UG/L OF AIR	289/162
TETRACHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/162
METHYLENE CHLORIDE	ND(5.0)	UG/L OF AIR	289/162
ETHYLBENZENE	ND(5.0)	UG/L OF AIR	289/162
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/162
CHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/162
CHLOROFORM	ND(5.0)	UG/L OF AIR	289/162
CHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
CHLOROBENZENE	ND(5.0)	UG/L OF AIR	289/162
CARBON TETRACHLORIDE	ND(5.0)	UG/L OF AIR	289/162
BROMOMETHANE	ND(5.0)	UG/L OF AIR	289/162
BROMOFORM	ND(5.0)	UG/L OF AIR	289/162
BROMODICHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/162
BENZENE	ND(5.0)	UG/L OF AIR	289/162
ACRYLONITRILE	ND(25.)	UG/L OF AIR	289/162
ACROLEIN	ND(25.)	UG/L OF AIR	289/162
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L OF AIR	289/162
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/162
1,2-DICHLOROPROPANE	ND(5.0)	UG/L OF AIR	289/162
1,2-DICHLOROETHYLENE (TOTAL)	7.4	UG/L OF AIR	289/162
1,2-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/162
1,1-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162

-CONTINUED-

CLIENT: GERAGHTY & MILLER, INC.
LAB NUMBER: 91070529

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/162

CONCLUSION OF LAB NUMBER: 91070529

LAB NUMBER: 91070530 DATE SAMPLED: / /
SAMPLE DESCRIPTION: ALIGN E #764 TIME SAMPLED:

ANALYSIS	CONCENTRATION	UNITS	BOOK/PAGE
METHANE	98.	UG/L OF AIR	484/20
GC/MS VOLATILE COMPOUNDS			/
VINYL CHLORIDE	ND(5.0)	UG/L OF AIR	289/163
TRICHLOROETHYLENE	190.	UG/L OF AIR	289/163
TOLUENE	ND(5.0)	UG/L OF AIR	289/163
TETRACHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/163
METHYLENE CHLORIDE	ND(5.0)	UG/L OF AIR	289/163
ETHYLBENZENE	ND(5.0)	UG/L OF AIR	289/163
DIBROMOCHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/163
CHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/163
CHLOROFORM	ND(5.0)	UG/L OF AIR	289/163
CHLOROETHANE	ND(5.0)	UG/L OF AIR	289/163
CHLOROBENZENE	ND(5.0)	UG/L OF AIR	289/163
CARBON TETRACHLORIDE	ND(5.0)	UG/L OF AIR	289/163
BROMOMETHANE	ND(5.0)	UG/L OF AIR	289/163
BROMOFORM	ND(5.0)	UG/L OF AIR	289/163
BROMODICHLOROMETHANE	ND(5.0)	UG/L OF AIR	289/163
BENZENE	ND(5.0)	UG/L OF AIR	289/163
ACRYLONITRILE	ND(25.)	UG/L OF AIR	289/163
ACROLEIN	ND(25.)	UG/L OF AIR	289/163
2-CHLOROETHYLVINYL ETHER	ND(5.0)	UG/L OF AIR	289/163
1,3-DICHLOROPROPENE (TOTAL)	ND(5.0)	UG/L OF AIR	289/163
1,2-DICHLOROPROPANE	ND(5.0)	UG/L OF AIR	289/163
1,2-DICHLOROETHYLENE (TOTAL)	7.1	UG/L OF AIR	289/163
1,2-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/163
1,1-DICHLOROETHYLENE	ND(5.0)	UG/L OF AIR	289/163
1,1-DICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/163
1,1,2-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/163
1,1,2,2-TETRACHLOROETHANE	ND(5.0)	UG/L OF AIR	289/163
1,1,1-TRICHLOROETHANE	ND(5.0)	UG/L OF AIR	289/163

CONCLUSION OF LAB NUMBER: 91070530

Quality control analyses were performed on samples at time of analysis in accordance with procedures published in Title 40 of the Code of Federal Regulations part 136, July 1, 1986 or in EPA Publication, SW-846, 3rd edition, Nov. 1986. ND(), where noted, indicates none detected with the detection limit in parentheses.

CONTINENTAL ANALYTICAL SERVICES, INC.

Clifford J. Baker

Clifford J. Baker
Laboratory Director

REED & ASSOC[IAT]ES, INC.

CHAIN OF CUSTODY

AIR SAMPLE CUSTODY AC № 1845

Client: HUSSMANN / SECO

Site/Proj.: [illegible]

Sampled By: [illegible signature] (signature)

Date: 7-11-91

SAMPLE NOs	TAG NOs	
VES STACK	~~760~~	759
ALIGN. A	~~761~~	760
ALIGN. B	~~762~~	761
ALIGN. C	~~763~~	762
ALIGN. D	~~764~~	763
ALIGN. E		764

SHIPPER

Delivered by: FEDERAL EXPRESS (signature)

Carrier: FEDERAL EXPRESS

Shipped to: CONTINENTAL LABS

Location: 1804 GLENDALE, SALINA, KS

Date: 7-11-91 Time: 1645 hrs

RECEIVER

Received by: ______ (signature) Date ______ Time ______

Delivered to: ______ Storage ______

Lab No. ______ Report No. ______

Instructions ______ Rush ______ Before ______ ______ Normal Turnaround

Storage ______ For ______

Analysis ______ Call for Instructions ______ ( ) ______ – ______

Specific Organics

Method(s) ______ Thermal Desorption ______

GC/MS Scan (circled) ______ Method 8240 Plus METHANE

Inorganics

Methods(s) ______

Metals

AA/Method ______

Asbestos count ______

Other particulates

Other ______

Report to: GERAGHTY & MILLER, INC.
3300 RIDER TRAIL S., SUITE 510
ST LOUIS, MO, 63045
ATTN DOUG MARIAN

Call in Results ( ) ______ – ______

BILL TO: GERAGHTY & MILLER
1700 AMERICAN BANK PLAZA
CORPUS CHRISTI, TX 78475
ATTN: GREG SENGELMANN

Disposition

______ Return TEDLAR BAGS ~~thermally desorbed tube~~ to GERAGHTY & MILLER – ST. LOUIS

______ Store until ______ ______ Dispose after analysis

CUSTODY FORMS
★ Completed form accompanies each shipment
★ Sampler, person delivering, lab receiver must sign
★ Detach white copy when shipped (R&A file)
★ Detach yellow copy for lab files
★ RETURN PINK COPY WITH LAB REPORT